

## Biogeochemical study of total fatty acid in surface sediment of Suiyo hydrothermal system

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Total fatty acid compositions in surface sediments obtained from Suiyo hydrothermal system, Izu-Ogasawara arc were studied. Core drilling will be performed at this site for aim of understanding subsurface biosphere in the system. The fluid chemistry of this site indicates no significant sedimentary organic matter below the seafloor, however, organic geochemistry of surface sediment has not been studied yet. Analytical result of the surface sediments indicated very low contribution of terrigenous input. Comparison between the sediments obtained different temperature area suggested that higher temperature area contained 6 times higher concentration of fatty acids than that of the other. It suggests the relationship between temperature or chemical gradient and biomass distribution.